

### **REMARKS**

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated September 23, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

#### **Status of the Claims**

Claims 3-8 are under consideration in this application. Claim 17 is being cancelled without prejudice or disclaimer. Claims 3-7 and 14-15 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim applicants' invention.

#### **Additional Amendments**

The claims are being amended to correct formal errors and/or to better recite or describe the features of the present invention as claimed. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

#### **Formality Rejection**

Claims 3 - 8 and 14 - 17 were rejected under 35 U.S.C. § 112, second paragraph, for being indefinite, ambiguous and requiring clarification.

In a first experiment, gene expression levels  $a$  and  $b$  are obtained for Samples A and B. The obtained dataset is  $(a1, b)$ . In a second experiment, gene expression levels  $a2$  and  $c$  are obtained for Sample A and C. Since Sample A is commonly used in the two experiments, the two dataset can be mediated by means of the expression levels for Sample A. The obtained datasets are each rescaled into  $(1, b/a1)$  and  $(1, c/a2)$  such that these datasets from two different experiments are made comparable with each other. Thus, the mediated dataset  $(b/a1, c/a2, 1)$  is produced, each element representing expression levels of gene for Sample B, C and A. To display this dataset as a 3D graphic, each element  $(b/a1, c/a2, 1)$  is assigned to  $x$ -,  $y$ -,  $z$ -axis of a coordinate.

Regarding the Examiner's comment of summation of the plurality of genes, it was not

never intended to be recited in the claims. The element  $(b/a_1, c/a_2, 1)$  is obtained for each gene and displayed as one mark as shown in Figs. 7-13. The user can choose to display only one gene or a plurality of genes in the 3D graphic. Different datasets corresponding to different genes are displayed on a 3D graphic. In addition, a user can display only one gene or a plurality of genes in the 3D graphic at different time points to see the change(s) over time.

The parameter  $r$  corresponds to a length of a vector  $(b/a_1, c/a_2, 1)$ . In claim 3, the product of the first/second ratio and  $1/r$  is calculated to calibrate the displayed marks to have an identical distance 1 from the origin (Figs. 7 & 13). The parameter  $R$  represents an aggregated magnitude of the expression levels  $b, c, a_1, a_2$  which is applied to  $b, c, a_1, a_2$  after they are calibrated with the parameter  $r$ .

As indicated, the claims have been amended to better define the parameters  $a_1, a_2, b, c, r$  and  $R$  as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

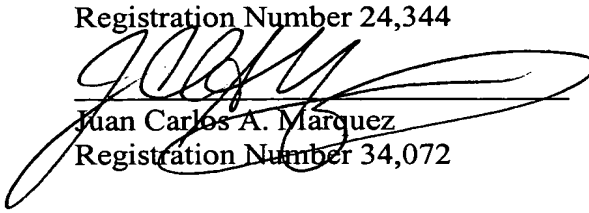
#### Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely. Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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